

The Power of *Promotores*: Enhancing the Ability of Medical Students to Provide for and Communicate With Underserved Populations

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Abstract

To increase community health knowledge, the El Paso Health Education and Awareness Team (EP-HEAT) was established at Paul L. Foster School of Medicine. The Medical Student Run Clinic (MSRC) emphasizes community health care access. *Promotores de salud* (community health workers) increase health care awareness and connect predominantly underserved communities with resources. Surveys were conducted to determine how EP-HEAT and MSRC patients' communication with *promotores* affected their access to health care and communication skills. Surveys demonstrated that 91% of EP-HEAT members agreed that working with *promotores* improved their communication ability. All MSRC patients surveyed stated interacting with *promotores* helped improve health care communication in various ways.

Keywords: promotores de salud, community health workers, health education, minority-majority, 360-degree training model



In Texas, as in other parts of the United States, Hispanics are disproportionately affected by health inequalities and unfavorable social determinants of health. Hispanics are at risk for many health disparities (e.g., asthma, cardiovascular, diabetes, and obesity) and lack access to health care (Dubay & Lebrun, 2012). In El Paso County, Texas, where our institution, Texas Tech University Health Sciences Center (TTUHSC El Paso) is located, the United States Census Bureau (n.d.-a) estimated that in 2021, 82.9% of the population was Hispanic or Latino, and the Texas Department of State Health Services (n.d.) reported that as of 2020, 37.5% of the population was obese, and 16.9% had been diagnosed with diabetes. In addition, the Centers for Disease Control and Prevention (2022) stated that people with obesity, heart disease, chronic kidney disease, and diabetes are at a higher risk of having more severe cases of COVID-19, and that hypertension may increase patients' risk as well.

Therefore, it is imperative to establish programs that can close health care disparities

in minority-majority communities. These programs also offer the opportunity to (1) improve opportunities for students to serve as educators during their undergraduate medical school training and (2) improve communication and trust between our border community members, our students, and health care professionals. Physicians often graduate with little understanding of the strategies used to target population level health determinants (Sisson & Starke, 2022). Our project focuses on having medical students serve as health education experts and collaborate with *promotores* to provide bilingual (English and Spanish) health education workshops and resources to the community they serve. In a Montana county, a novel strategy has been established where community organizing, community health workers [*promotores*], and advocacy are incorporated into medical school training: a promising model for addressing disparities across marginalized communities (Logan & Castañeda, 2020).

Promotores de salud, also called community health workers, act as liaisons with the

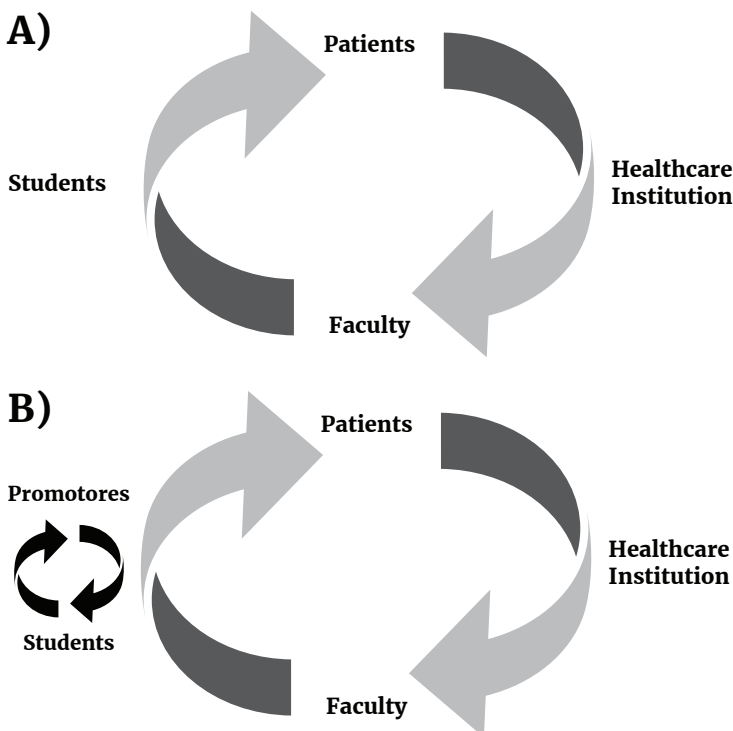
local community and health care resources. Promotores de salud (hereinafter referred to as *promotores*) predominantly work in medically underserved, low-income, minority neighborhoods, and connect vulnerable society members to resources, health education, and health and social services. Promotores are vital to address disparities and are a critical force in overcoming structural vulnerability and inequities in health (Logan & Castañeda, 2020). The unique ability of promotores lies in their existing immersion in the local community. Nationally, it can be a challenge for people to successfully navigate the health care system, particularly in areas with members who are predominantly of a low socioeconomic class (McMaughan et al., 2020). These challenges can be exacerbated by cultural differences and language barriers that many health care workers may encounter, often seen along the general border region, including El Paso, Texas.

The mission of Paul L. Foster School of Medicine (PLFSOM) at TTUHSC EP is to improve the lives of members in the local community and the border region by focusing

on the unique health care needs of socially and culturally diverse populations through integrated education, research, and patient care. PLFSOM is a leader in educational innovation, with a cutting-edge curriculum and highly engaged students in the El Paso community. To facilitate the expansion of health care access and information in the border community PLFSOM TTUHSC has implemented two outreach programs in collaboration with promotores: (1) The TTUHSC El Paso–Health Education and Awareness Team (EP-HEAT) and (2) TTUHSC Medical Student Run Clinic (MSRC). Our project’s critical, innovative approach utilizes a 360-degree training model we developed as a method to improve student-driven community outreach and engagement (Figure 1).

As a result of the COVID-19 pandemic, medical students did not have the same opportunities to engage with the community face-to-face as they routinely have in the past. Students’ ambition for community engagement led to our project development in 2019, the TTUHSC EP-HEAT. EP-HEAT’s overall goal was to develop a bilingual (English and Spanish) educational

Figure 1. Illustration of 360-Degree Training Model



Note. (A) Traditional method of medical education in health care institutions. (B) Proposed method for implementing promotores in medical education for a 360-degree training approach with students for community engagement and outreach.

platform, and to enhance the health and safety of our community by disseminating accurate, helpful information provided by medical students and faculty. Medical students were at the forefront in the design and implementation of our platform, working with peers and faculty to create the content. EP-HEAT's faculty moderators were physicians and scientists with specialties in biochemistry, immunology, microbiology, pathology, internal medicine, pediatrics, physiology, genetics, and cell biology. In addition, a TTUHSC El Paso board-certified psychologist on our team served to moderate mental health topics. Due to the diverse specialties our team contains, EP-HEAT can tailor the bilingual health education material to numerous health-related issues, such as COVID-19, disease prevention, diabetes, cancer, heart disease, and immunizations. Overall, EP-HEAT strives to improve students' professional development by providing opportunities for community engagement, chiefly presenting health education.

The MSRC was established in 2013 in the community of Sparks, Texas. The population of Sparks is an underrepresented community with high poverty and low education levels and is medically underserved. PLFSOM TTUHSC EP students and faculty chose to serve this community due to its low socioeconomic status, lack of health care access, low education level, language barriers, and high percentage of undocumented status individuals. The community of Sparks is composed of 97.8% Hispanic population, where 53.2% are not U.S. citizens, 93.2% are Spanish speakers, only 14.6% hold an associate's degree or higher, 58.2% are living in poverty, and the median household income is less than \$30,848 (United States Census Bureau, n.d.-b). The MSRC is run by the medical directors, Student Leadership Team, and promotores. Promotores work closely with the Student Leadership Team to determine community needs and bring health care services addressing those needs to the community. The MSRC provides free primary health care services to patients of all ages, including mammogram screenings and laboratory tests. Additionally, the promotores in the community help collaborate with other organizations to provide colorectal cancer screenings, English language classes, food pantries, and other resources. The students involved with MSRC can practice interacting with patients under the guidance of promotores, who will aid students in the future when communicating

with patients by improving patient understanding and shared decision making (Nie et al., 2020).

Organizations like EP-HEAT and the MSRC strive to effectively help the people in the border region and provide a communication bridge between the community and health care access and education with the help of promotores.

Project Description

We hypothesized that the collaboration of promotores with EP-HEAT and the MSRC would enhance medical students' ability to effectively disseminate health education and resources to underserved communities and patients. To test our hypothesis, a 360-degree training program was instituted whereby promotores and medical students learned from one another. Specifically, EP-HEAT faculty and students trained promotores on health-related material (such as COVID-19 and healthy living). Then, during community outreach events, promotores taught students how to effectively communicate with community members, providing students the opportunity to practice Spanish outside a health care setting. As part of the PLFSOM curriculum, medical students must complete a medical Spanish course that enhances their ability to engage and treat the culturally diverse populations in our border region. Promotores ensured all health education material was culturally competent and at an appropriate literacy level for the community to understand the information being communicated. Additionally, communication skills that students obtained during the 360-degree training program will be essential throughout their career in health care, including but not limited to patient encounters, educational presentations to the community, and community town hall meetings (Nie et al., 2020).

Students had the opportunity to interact with promotores on numerous occasions at various EP-HEAT community events, including COVID-19 vaccination events, care package distributions, digital upskilling events, and health education workshops. The MSRC was established in the Sparks community in 2013 and has been a health care resource for the community members with little to no access to traditional health care infrastructure. The MSRC students work closely with promotores, which aids in patient recruitment and dissemination of health care awareness information.

Measuring the Impact

To evaluate our hypothesis, three anonymous surveys were distributed (exempt from IRB formal review, Number E22015). The first survey was an anonymous electronic survey provided to measure how students' ability to disseminate health knowledge was affected after working with promotores. The second survey was distributed to promotores to gain insight regarding their collaboration with students. The third survey was given to MSRC community members to determine the role of promotores in identifying resources. The surveys were designed to investigate both the educational benefits for students collaborating with promotores in disseminating health education information and the broader impact of promotoeas on enhancing access to health care in the community. This multifaceted approach enabled a comprehensive understanding of how such collaborations can positively influence both student development and community health.

Students, promotores, and community members consented to engage in the research study by responding to the survey.

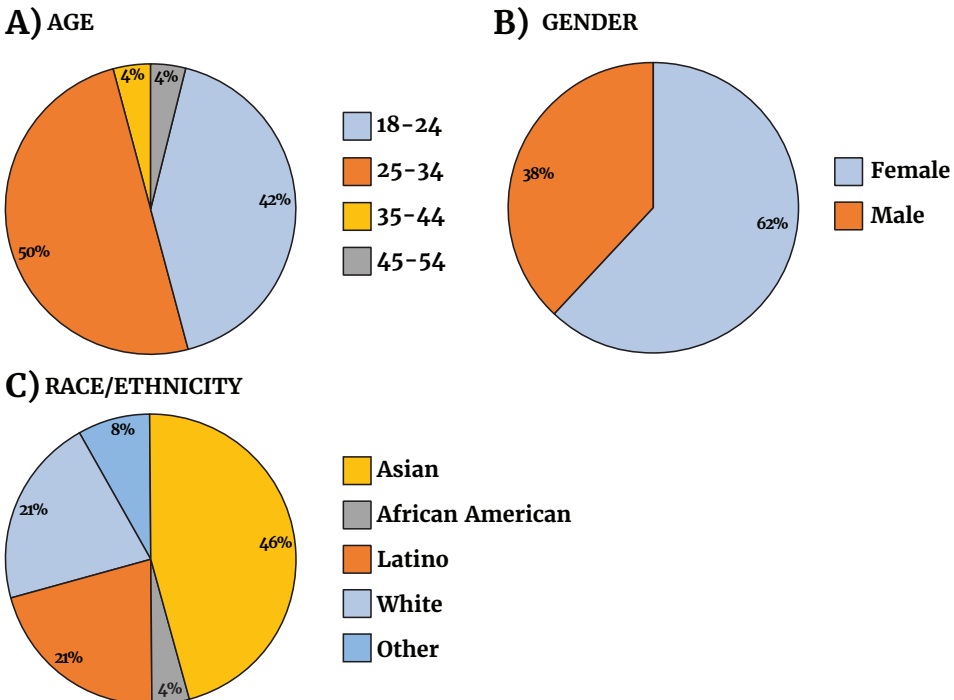
Email reminders were sent as appropriate to students and promotores, based on weekly monitoring of the survey response rates. The survey was open for one month from the day of the initial invite. Voluntary MSRC patient responses were collected anonymously via paper surveys. The MSRC patient surveys were given to each patient as part of their appointment paperwork, and the person administering the surveys explained that it was optional and part of a study. All surveys were placed in a separate folder and remained anonymous. Papers were shredded and disposed of after data was collected. Results were reported only in the aggregate.

Findings

Medical students who interacted with promotores at EP-HEAT community events and at the MSRC were asked to participate in an anonymous online survey. A total of 24 surveys were collected. The majority of students fell in the 18–34 age range (Figure 2A). The majority of participants self-identified as female (Figure 2B) and identified their race/ethnicity as Asian (Figure 2C).

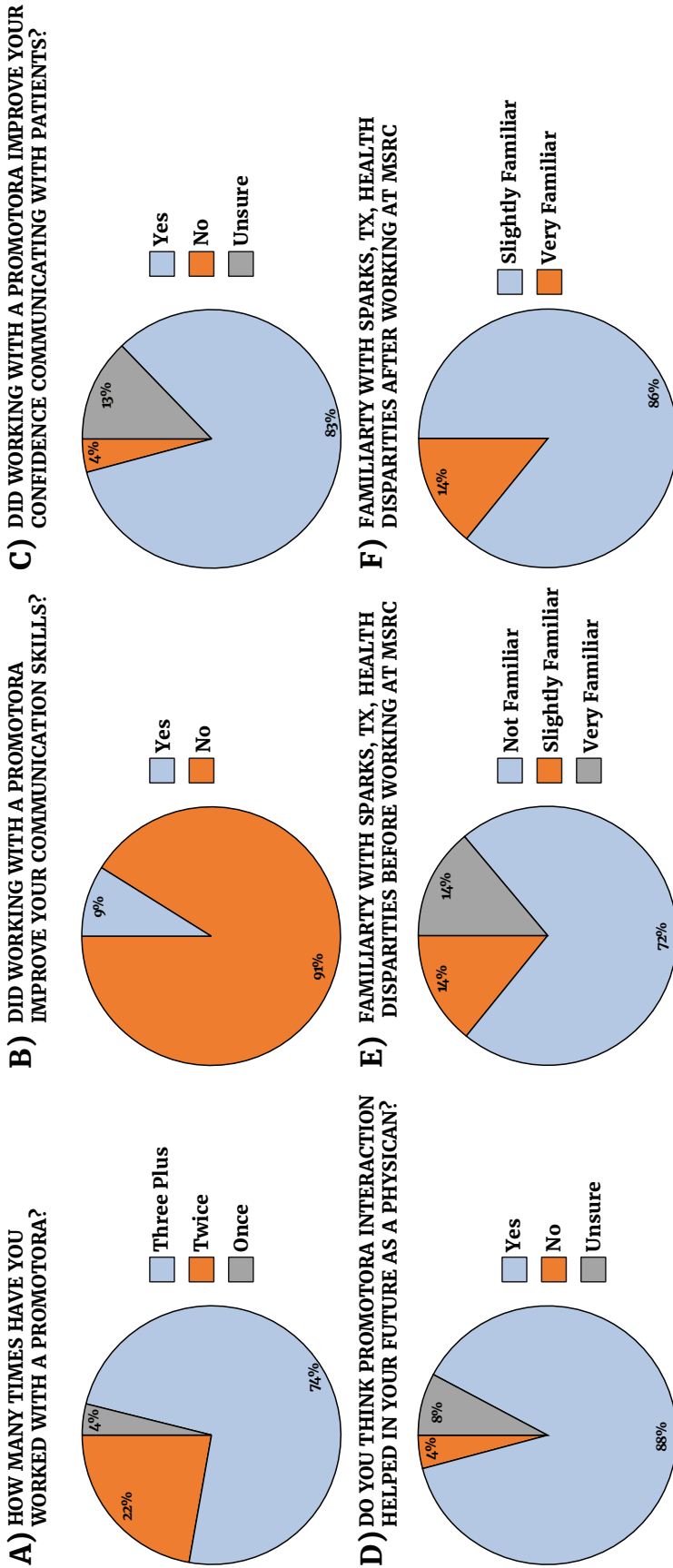
The vast majority of students reported

Figure 2. Demographics of Medical Students Who Worked With Promotores



Note. Demographics: (A) 42% were in the age range 18–24, 50% in the age range 25–34, 4% in the age range 35–44, and 4% in the age range 45–54. (B) 62% identified as female, and 38% as male. (C) 46% identified as Asian, 21% as Hispanic or Latino, 21% as White, 8% as other, and 4% as African American.

Figure 3. Frequency and Efficacy of Collaboration Between Students and Promotors



Note. (A) 74% of promotores collaborated with students more than three times a month; 22% of promotores collaborated with students twice a month. (B) 91% of students agreed communication with the community improved after working with a promotora. (C) 83% of students agreed their confidence in communication skills improved. (D) 88% percent of students agreed that working with promotores would help their communication skills as a future physician. (E) Prior to working with community members and promotores, 72% of students reported being unfamiliar with Sparks, Texas. (F) After working with promotores, the percentage of students familiar with Sparks improved to 86%.

interacting with *promotores* at least three times during MSRC and EP-HEAT events (Figure 3A). Ninety-one percent of the students who completed the survey agreed that working with *promotores* helped them improve their communication skills with the community (Figure 3B). Students were asked to describe some ways their ability to communicate with the community was enhanced by observing *promotores*. Some of their answers were as follows:

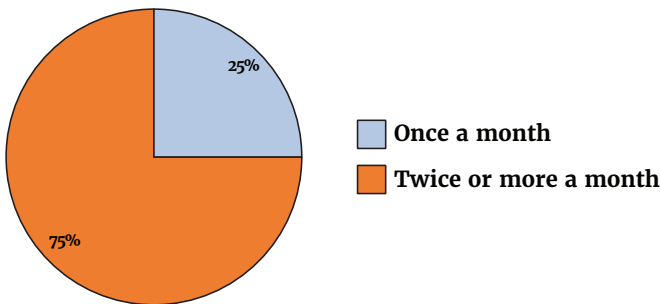
- The *promotores* helped me to interact with community members as an equal. For example, at one of the vaccination events, a community member had some difficulty getting out of their car due to mobility issues. The *promotora* explained that if you hover over them and continue trying to help, you might hurt their sense of autonomy and independence. She said to offer once, and if the community member does not want your help, do not keep offering.

- Understanding the needs of the community.
- The *promotores* helped me to understand the body language and words to use to connect with the members of the community. The *promotores* allowed me to see how to make a personable connection with those of the community.
- I was able to better connect with my patients in the clinic setting. I worked on continuing to avoid medical jargon in my conversations.
- Learned some basic Spanish skills and ways to approach members of the community.

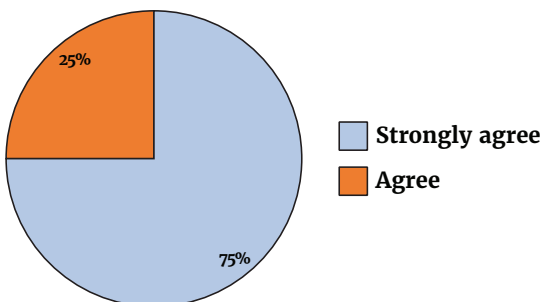
The majority of students working with *promotores* stated in surveys that not only did their confidence in communication improve after working with *promotores* but they thought that their experiences would also improve their patient communication as future physicians (Figure 3C and 3D). As a baseline the majority of students surveyed stated they were not very familiar with the health disparities associated with Sparks,

Figure 4. Promotores' Interactions With Students

A) NUMBER OF TIMES PER MONTH STUDENTS COLLABORATED WITH PROMOTORES

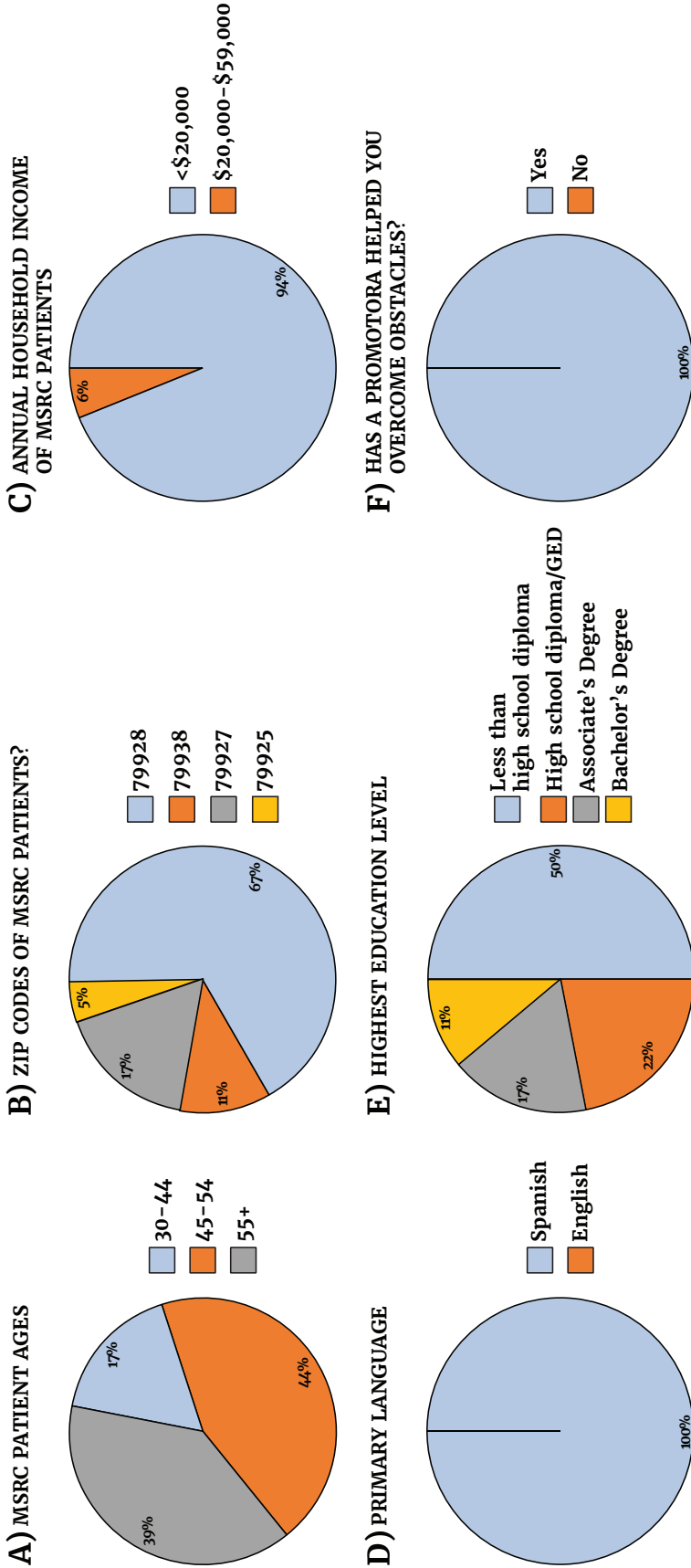


C) DO YOU THINK WORKING WITH STUDENTS HAS IMPROVED THEIR COMMUNICATION SKILLS WITH THE COMMUNITY?



Note. (A) 75% of *promotores* reported working with medical students twice a month or more. (B) 75% of *promotores* reported that they strongly agreed that working with students improved the students' communication skills.

Figure 5. Demographics of MSRC Patients Surveyed



Note. (A) 17% were in the age range 30-44, 39% in the age range 45-54, and 44% in the age range 55+. (B) 67% lived in the zip code area 79928, 11% in the zip code area 79938, 17% in the zip code area 79927, and 5% in the zip code area 79925. (C) 6% had an annual household income of \$20,000-\$59,000, and 94% had an annual household income less than \$20,000. (D) The primary language is Spanish for 100% of patients. (E) 50% have an education level of less than high school, 22% have a high school diploma or equivalent, 17% have an associate's degree, and 11% have a bachelor's degree. (F) 100% of patients said a promotora helped overcome obstacles.

Texas (Figure 3E). However, after working with promotores all students reported having some familiarity with Sparks (Figure 3F).

Promotores were asked to complete an anonymous survey in an effort to determine whether promotores thought student communication improved upon working with them. The promotores reported collaborating with medical students once or more per month (Figure 4A). Overall, the promotores stated they saw an improvement in students' communication skills with the community (Figure 4B). When promotores were asked about their experience working with med students, the open-ended responses were positive and demonstrated below.

- It's a nice experience. They teach me a lot and I feel like I teach them too.
- It is a good experience, but I would like to have more students involved.
- Good and very constructive. Sometimes it is not very difficult to agree with them for their classes and activities.
- I enjoyed a lot working with them. I see them form better relationships and trust with community.

Further, surveys were developed to determine the impact of promotores on the patients at the MSRC. Participants from the MSRC patient population were asked to fill out the survey to determine if the promotora helped with health care access. Only patients who engaged with a promotora were asked to take the survey. A total of 18 participants completed the survey for the study. The community participants' demographics, including age, zip code, annual household income, primary language, and highest level of education, are reported in Figure 5A–E. All patients surveyed agreed that a promotora had helped them overcome some obstacles they faced when obtaining health care.

In addition, participants were asked to provide examples of how a promotora helped them overcome health care barriers (data not shown). The three most common obstacles to health care included lack of money, no nearby clinics, and a language barrier. When surveyed, 100% of MSRC patients that interacted with a promotora agreed that a promotora helped them overcome some of the obstacles they faced regarding

health care access (Figure 5F). Our results strongly support that patients at the MSRC received assistance from promotores to overcome barriers to health care and resources. Additionally, our results support the notion that medical students working with promotores increase their confidence level in communication.

Implications of the Early-Stage Assessment

The hypothesis that the collaboration of promotores with EP-HEAT and the MSRC would enhance medical students' ability to effectively disseminate health education and resources to underserved communities and patients was demonstrated by the results. However, despite the vast majority of students agreeing that their communication skills had improved after interacting with promotores, it is difficult to assess the level of improvement due to subjective measurement and the small sample size of 24 students. Additionally, 22% of members interacted with promotores on two occasions per month, whereas 74% interacted with them on three or more occasions per month. The amount of interaction with promotores might impact the level of improvement in communication skills the EP-HEAT members developed.

Only 4% of students disagreed that interacting with promotores allowed them to improve their communication skills with the community. This disagreement might be due to their limited interaction time or the type of event in which they participated. Additionally, these students might have already been very confident in their ability to interact with community members. Some 83% of students agreed that interacting with promotores allowed them to improve their communication skills with the community. Thus, exposure to promotores resulted in an overall increase in communication skills with community members for this small group of students. Physicians mainly communicate in small-group settings with patients, families, and other health care professionals (Nie et al., 2020). Increased student interaction with members of the community further contributes to improving students' communication skills. Additionally, practicing public speaking will aid the students in the future when communicating with patients and improve patient understanding and shared decision-making (Nie et al., 2020).

All of the MSRC patients agreed that a promotoria provided help in the community; however, the patient sample size was also small, so extrapolation to other populations might have different results. Despite the sample size, further studies could investigate how promotores can improve health care access across the country. Exploring how promotores in the community help connect members to health care resources will contribute to research and possible interventions involving promotores.

Survey results indicated that promotores and students collaborated on projects once or more per month. Although the overall responses regarding promotores collaborating with students were positive, one feedback was the encouragement of more students to be involved in community events. Limited time for students to engage in community events can be a factor in this 360-degree training model. The more students and promotores engage and collaborate with one another, the more efficacious the 360-degree model could be.

Next Steps and Conclusion

This project strives to improve opportunities for students to serve as educators during their medical school training while bridging health care access to underserved populations. In addition, this project attempts to improve communication and trust between our border community members, students, and health care professionals. Our 360-degree model focuses on providing bilingual (English and Spanish) health education workshops to the community, specifically by having medical students collaborate with *promotores* and serve as health education experts for the community.

If successful, the outcome of this program will be a model that improves health outcomes for a drastically underserved community in border communities and establishes a permanent promotores de salud program at TTUHSC El Paso that will provide community outreach on numerous health-related topics such as diabetes and healthy living, as well as enhanced future physicians' cultural competency and communication skills within the border region. This model has the potential to create a generation of health care providers who are not only skilled clinicians but also advocates for health equity. We are currently working on a train-the-

trainer system to establish our 360-degree training model at other institutions.

Other U.S.-Mexico border-related medical schools exist within Texas, including the University of Texas Rio Grande Valley School of Medicine in Edinburg and Long School of Medicine University of Texas Health, San Antonio. Additionally, medical schools exist outside Texas in the border region, such as Burrell College of Osteopathic Medicine in Las Cruces, New Mexico, the University of Arizona College of Medicine in Tucson, and the University of California in San Diego, where this model would likely be effective. Beyond border-associated schools, most medical schools are located in large enough cities to be near health care disadvantaged and at-risk populations, and community health workers can be trained from within those populations to work together with the medical school and better support and address those communities' needs while preparing the associated students to better communicate with underserved individuals.

All the MSRC patient population surveyed agreed that a promotoria helped them overcome an obstacle to health care. The MSRC model can be utilized to help the underserved populations in various other communities who lack access to resources and health care. More than half of the population at Sparks, Texas, is of low socioeconomic status and lacks health insurance; many are suffering from underlying conditions, including obesity, diabetes, and cardiovascular disease (Cione et al., 2020). Our results with this population indicate a possibility of further improving health care outcomes across similar communities through promotores. The adequate training of promotores will increase their knowledge of health care information, and they will be able to become a resource of health care information for the rest of their community (Cupertino et al., 2013).

Official implementation of the 360-degree model into the curriculum is still being explored. This model can be taught in preclerkship courses such as Society, Community and Individual, where students focus on health disparities, how health care affects the population, and vice versa. In addition, this model can be taught as an elective course during the clerkship years, providing the students an opportunity to serve as educators and gain the trust of the population that they serve.

About the Authors

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